

DIVERSIFICATION FOR AN INCLUSIVE AND RESILIENT AGRI-FOOD SYSTEM IN KENYA



Kenya Agricultural and Livestock Research Organization (KALRO)
&
Alliance of Bioversity International & CIAT



Initiative on
Diversification in East
and Southern Africa



Initiative on
Gender Equality





Introduction

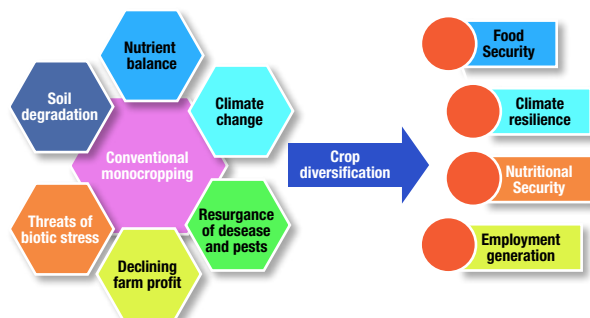
The impacts of climate change in Eastern and Southern Africa (ESA), are already well known to farmers. Climate change affects women more negatively compared to men in five impact areas: (i) agricultural production; (ii) food and nutrition security; (iii) health; (iv) water and energy; (v) climate-related disaster, migration, and conflict. Over 2 million people in Kenya face the threat of food insecurity due to climate change.

Maize production is particularly vulnerable to climate change. It is projected to face not only 15% climate-related declines in yield without adaptation but also challenges from diminished cropland suitability and poor agronomic inputs and management; degraded environmental bases with declining soil fertility and degraded water systems are already apparent.

Given that maize-mixed systems cover over 75% of the cropping land in many places, it is critical to build climate resilience and de-risk through diversification.

Why do we need diversification?

Crop diversification seeks to promote crop diversity by crop rotation, multiple cropping, or intercropping, with the goal of improving productivity, sustainability, and supply of ecological systems.



The partnership

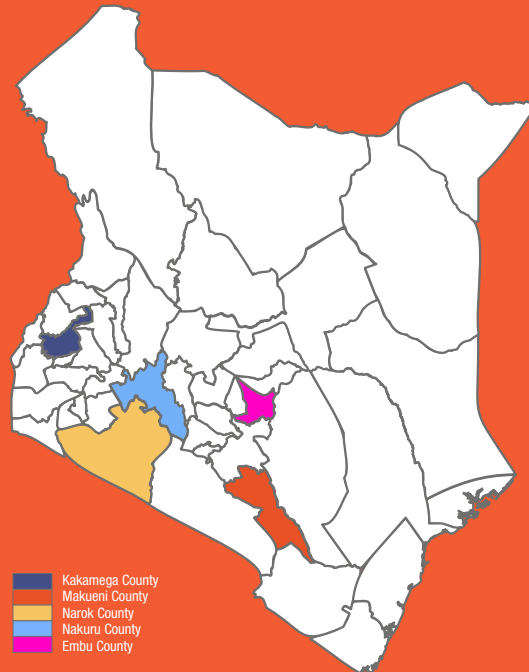
KALRO is partnering with the Alliance of Bioversity International and CIAT under two initiatives:

Ukama Ustawi (UU): Diversification for Resilient Agri-food in East and Southern Africa: This aims to help millions of smallholders intensify, diversify and de-risk maize-mixed farming through improved extension services, institutional capacity strengthening, targeted farm management bundles, policy support, enterprise development and private investment.

The Gender Equality Initiative (HER+): Tackles gender inequality in agri-food systems to build climate change resilience in the Global South. We aim to co-identify and model diverse scenarios for bundling climate-smart technologies to empower women and men to be partners and drivers of climate-change solutions.

In Kenya, Ukama Ustawi and HER+ are implemented in 5 counties: Nakuru, Narok, Kakamega, Embu and Makueni.

Map showing UU and HER+ sites in Kenya



Interventions In Nakuru County

In Nakuru County, KALRO Njoro is collaborating with the Alliance of Bioversity International and CIAT, Participatory Approaches For Integrated Development (PAFID) and the County Governments of Nakuru to scale out sustainable intensification and climate smart agriculture practices to build resilience in the maize based system. The interventions are in 3 Sub-Counties: Njoro, Rongai and Gilgil where 6 mother demos have been established to enable learning by farmers and researchers.

Interventions revolve around the following areas:

- Climate Smart Agriculture
- Conservation Agriculture
- Crop diversification
- Social Technical Innovations Bundling
- Farmer learning and scaling of sustainable management practices

1. Climate Smart Agriculture

Interventions in this area seek to increase productivity and incomes, enhance resilience to climate (adaptation) and reduce possible greenhouse gas emissions (mitigation)

CSA PILLARS

PRODUCTIVITY
Increases the **productivity**
and agricultural **incomes**

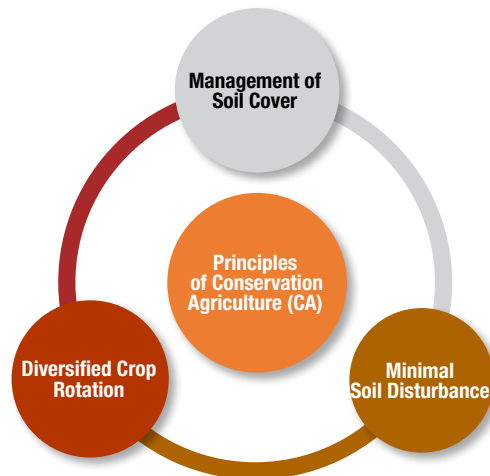


ADAPTATION
Enhance resilience
(Climate change
adaptation)

MITIGATION
Reduce/remove where
possible CHCs emissions
(**Mitigation**)

2. Conservation Agriculture

The project promotes Conservation Agriculture and promotes the three principles of CA that help to regenerate soils while at the same time building resilience to climate change.



3. Crop diversification

Crop diversification involves integrating legumes such as beans, green grams, pigeon peas, cowpea into the cereal based cropping systems.



Maize-Beans strip cropping at Kapkatet, Rongai

4. Social Technical Innovations Bundling

We aim to co-identify and model diverse scenarios for bundling climate-smart technologies with stakeholders.



Authors: Patrick Ooro¹, Boaz Waswa² and Eileen Nchanji²

1 Kenya Agricultural and Livestock Research Organization (KALRO)
KALRO-Njoro.
Private Bag (20107), Njoro.
Tel: 020-3510865.
Email: patrick.Ooro@kalro.org

2 Alliance of Bioversity International and CIAT
P.O. Box 823-00621, Nairobi, Kenya .
Email: b.waswa@cgiar.org and e.nchanji@cgiar.org
W: bioversityinternational.org

5. Farmer Learning



Training on Conservation Agriculture mechanization by PAFID, KALRO Njoro.

